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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/730,441	12/08/2003	John Stewart	TH-2491 (US)	2239
23632	7590	12/13/2006	EXAMINER	
SHELL OIL COMPANY P O BOX 2463 HOUSTON, TX 772522463			WONG, ALBERT KANG	
			ART UNIT	PAPER NUMBER
			2612	

DATE MAILED: 12/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/730,441

Applicant(s)

STEWART ET AL.

Examiner

Albert K. Wong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) -14, 7, 11-18, and 20-27 is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_ is/are rejected.
- 7) ☒ Claim(s) 5, 6, 8-10 and 19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) ✓
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_.

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1. This Office action vacates the final rejection mailed September 25, 2006. It has been determined that the provisional application is not considered to be prior art under 35 U.S.C. 102. Claims 1-27 are pending.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 4, 12-13, and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Dubinsky et al (2002/0039328) .

Regarding claim 1, the claimed acoustic wave generator is shown as item 206; the claimed coupler mechanism is shown as item 406; and the claimed signal controller is shown as item 706.

Regarding claim 4, see paragraph 32.

Regarding claims 12-13, see paragraph 50.

Regarding claim 15, see paragraph 50.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2-3, 7, 11, 14, 16-18, and 20-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dubinsky et al.

Regarding claims 2-3, Dubinsky does not disclose a generator comprising a piezo crystal or wafer. Dubinsky teaches in paragraph 50 that any embodiment meeting the function of the invention would be sufficient. One of ordinary skill in the art would recognize that piezo crystals and wafers are used to generate acoustic waves. It would have been obvious to use these means instead of the magneto-restrictive means as suggested by Dubinsky.

Regarding claim 7, Dubinsky discloses in paragraph 40 expandable pads and ribs which engage the drill pipe to couple the acoustic signal to the pipe. These correspond to the claimed slips and setting mechanism. The location of the slips and the number of slips is considered to be obvious based on the coupling requirements.

Regarding claim 11, Dubinsky teaches a controller with processor and an acoustic generator drive. The system in Dubinsky does not specify if the transmitted signal is in digital form. It is conventional to transmit digital acoustic signals because of advantages in signal processing. It would have been obvious to include a ADC to convert analogue sensor signals so that they may be transmitted digitally or stored.

Regarding claim 14, Dubinsky does not specify the type of sensor, only the parameter sensed. It is well known to use the claimed sensor types to sense the parameters of interest in Dubinsky. It would have been obvious to use to claimed sensors for their known function.

Regarding claim 16, Dubinsky teaches the monitoring of down hole tools, but does not specify the tool type. One of ordinary skill in the art would recognize various downhole tools. It would have been obvious to monitor any downhole tool as suggested by Dubinsky, including the claimed tools.

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Regarding claim 17, the gauge has been addressed in claim 1 which is inserted into a pipe. Dubinsky teaches a sensor which is equivalent to a SCADA. It would have been obvious to contain the sensor within a box for protection. Since the sensor assembly in Dubinsky is contained within the BHA, which is typically connected to the pipe, it is acoustically connected to the pipe.

Regarding claim 18, this limitation has been addressed.

Regarding claim 20, Dubinsky teaches the step of placing an acoustic generator within a pipe for use within a borehole and setting the acoustic generator. The gauge is considered the equivalent of an acoustic generator. It would have been obvious to run the gauge when the pipe is in the borehole since the placement of the device is not fixed.

Regarding claim 21, Dubinsky teaches the engagement of pads or ribs which are the equivalent or slips.

Regarding claim 22, the engagement of the pads establishes an acoustic path.

Regarding claim 23, this is the method equivalent of the apparatus claim. The use of an apparatus in its intended manner would have been obvious.

Regarding claim 24, a SCADA box is a sensor/transmission system. Dubinsky teaches the use of a sensor and transmitter. Thus, the combination of the sensor and transmitter is considered a SCADA box.

Regarding claims 25-27, these are method equivalent of apparatus claims which has been shown to be obvious. The use of an apparatus in its intended manner would have been obvious.

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6. Claims 5-6, 8-10, and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Albert K. Wong whose telephone number is 571-272-3057. The examiner can normally be reached on M-Th.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached on 571-272-7308. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Albert K. Wong  
November 28, 2006



**ALBERT K. WONG**  
**PRIMARY EXAMINER**